

6/12/00 Final Agenda
June 14-15 2000 Mining Waste Scientist to Scientist Meeting

Location: EPA/ORD/National Exposure Research Lab (NERL), Executive Auditorium, 944 East Harmon Ave, Las Vegas, NV, office telephone: 702-798-2235

Directions/Map from Airport to EPA offices: see separate (electronically available) file.

Meeting Purpose:

- Provide attendees with a general understanding of the state of the science of mining waste issues, spanning the risk paradigm (i.e., characterization, fate and transport analysis, risk assessment, remediation, etc), with a particular focus on EPA research, related EPA projects across the regions and program offices, and technology transfer. [Note: please keep in mind that we will not likely be able to discuss in detail what is happening for any given project or issue, due to time limitations. Perhaps additional details can be provided in separate meetings or discussion].
- Provide attendees with an understanding of the status of mining waste-related Regional and Program Office (OSWER and possibly OW) regulations, policies, and issues.
- Identify major future research and study needs.

Process for Each Session:

- Each session would begin with a short overview of the topic and be followed by a group discussion of research needs and issues. For each session, half of the time allotted would be for presentation, half for questions/answers and discussion.
- Regarding logistics for questions, we will first ask for a question from the Vegas audience, then ask for a question from the telephone audience, and repeat the above. If a lull occurs in questions from the audience at the meeting and on the teleconference, then we will look at the internet questions and ask questions in the order listed there.
- Suggested discussion questions at each technical session:
 - Do these issues adequately reflect the most critical science questions? If not, what's missing?
 - What are the program/regional office needs relating to these topics/issues?
 - What is the current state of the science for each of these issues? How are risk assessors addressing these issues? What are the main weaknesses to our current methodologies and practices? How can these methods and procedures be improved? What are the major barriers to progress?
 - Is it possible to rank these issues by importance? By scientific uncertainty? By ORD's ability to provide answers and make a difference?

Wednesday, June 14, 2000: Day 1

All times in Las Vegas are Pacific Standard Time (PST); sessions are scheduled within an 8 AM PST and 8:00 PM EST time frame.

Note: Each presenter should plan to finish presenting their material in half of the time noted for each presentation (i.e., half of the time allotted is for presentation, half for questions/answers and discussion.)

8:00 am PST: Welcome, Purpose and Introductions (20 min)

- John Lyon, ORD/Las Vegas Environmental Sciences Division Director; Welcome to the Lab and overview of ORD/NERL-LV (15 min)
- Ed Hanlon and Paul Zielinski, ORD/OSP; Overview of Meeting; Summary of main topics/issues; meeting format and schedule/time constraints; use of PlaceWare; overview of ORD research planning process (10 min)

8:25 am PST: Regulatory and Non-scientific Issues (1 hr)

- Speakers
- Nick Ceto, R10
 - Steve Hoffman, OSWER
 - Outline present status of mining waste policy and regulations and context of how current regulatory structure has shaped EPA's involvement on mining waste issues; provide a 'global' perspective of State and other federal agency regulatory and policy issues regarding mining waste. Speaker(s): Steve Hoffman, OSWER (30 min)
 - Various Regulatory and Non-scientific Issues of Interest. Speaker(s): Nick Ceto, R10 (30 Min)
 - establishing closure performance standards
 - adequate financial assurance
 - establishing flexible environmental performance standards for addressing contamination in historic mining districts
 - Good Samaritan legislation

9:25-9:40 am PST: Break

9:40 am PST: Human Risk Assessment Issues (30 min)

- Speakers
- Irene Dooley, Office of Water; Paul White, ORD/NCEA
 - EPA's proposed arsenic MCL rule; update on other arsenic risk issues. Speaker (s): Irene Dooley, Office of Water; Paul White, ORD/NCEA (30 min)
 - Arsenic handouts

Wednesday, June 14, 2000: Day 1 (cont'd)

10:20 am PST: Biological/Ecological/Environmental Effects (3 hrs, 50 min total)

- Speakers
- Anne D. Dailey, R10; Dale Hoff, R8; John Hillenbrand, R9; Mark Bagley and Jim Lazorchak, ORD/NERL; Michael McDonald, ORD/NHEERL; Jim Pendergast, Office of Water.
 - Use of EMAP system to assess cumulative impacts to biological resources and ecosystems, surface and groundwater water quality, and environmental effects; EMAP remote sensing capabilities. EMAP western pilot project. Speaker(s): Michael McDonald, ORD/NHEERL (1 hr, 10 min)

11:30 am - 12:15 pm PST: Lunch

12:15 pm PST: Biological/Ecological/Environmental Effects (cont'd)

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- TMDL tools and applicability to mining sites. Speaker(s): Jim Pendergast, Office of Water (20 min)
 - Issue Description: The need for genetically resistant organisms and biologic communities adapted to naturally mineralized conditions, and research regarding the feasibility of planting/adapting these communities in mining impact areas. Speaker(s): Dale Hoff, R8 (possibly other Regional contacts)(20 min)
 - Briefing Handouts: a) genetic diversity and genetic induction research and applications to species resistance and other ecological issues; b) toxicity and bioassessment work in ORD/NERL and ORD/NRMRL; and c) other related activities at ORD/NERL. Speaker(s): prepared and presented by Mark Bagley and Jim Lazorchak ORD/NERL (30 min)
 - Selenium eco risk; ORD-NHEERL and ORD-NERL ecological risk handouts. Speaker(s): Ed Hanlon, ORD/OSP (10 min)

1:35-1:45 pm PST: Break

Wednesday, June 14, 2000: Day 1 (cont'd)

1:45 pm PST: Biological/Ecological/Environmental Effects Case Studies (1 hr, 40 min):

- Coeur d'Alene site: Coeur d'Alene Ecological Risk Assessment: Summary of current project status, expansion of a chemical-based risk assessment to include secondary physical factors and non-mining related stressors, application of the Migratory Bird Treaty Act in an EcoRA, use of cumulative distribution functions (CDFs) to determine risk and subsequent application to the feasibility study, and coordination with numerous stakeholders via an ecological risk assessment workgroup. Speaker(s): Anne D. Dailey, R10 (50 min)
- Clark Fork project; Technical challenges in the development of the Clark Fork River Ecological Risk Assessment.: Summary of several key, cutting edge issues assessed/resolved at this site, focusing on the heavily scrutinized decisions of scientists including issues dealing with trout feeding studies, avoidance behavior, use of Water Effect Ratio (WER) testing and their applicability on a Superfund site, extrapolating toxicity data to endangered species, etc. The discussion will also include proposals for research to help address the ongoing controversies. Speaker(s): Dale Hoff, R8 (50 min)

3:25-3:35 pm PST: Break

3:35 pm PST: Characterization/Monitoring Issues (1 hr)

- Speakers
- Larry Eccles, ORD/NERL; Ed Heithmar, ORD/NERL
 - Inexpensive methods to characterize mining site metal migration, and ground-water/vadose zone monitoring strategies that can provide early alert of potential contaminant migration before ground water is seriously impacted and regulatory standards are exceeded. Speaker(s): Larry Eccles, ORD/NERL (25 min)
 - Inexpensive field or lab analytical methods. Reliable methods for sampling/analysis of mercury in water and in solids. Speaker(s): Ed Heithmar, ORD/NERL (35 min)

4:35 pm PST: Remote Sensing (25 min)

- Speakers
- Diana Bless, ORD/NRMRL; David Williams and Tom Mace, ORD/NERL,
 - Use of remote sensing to address migration issues. Speaker(s): Diana Bless, ORD/NRMRL; David Williams and Tom Mace, ORD/NERL (25 min)

5:00 pm PST: ADJOURN

Thursday June 15, 2000: Day 2

8:00 am PST: Modeling and Predictive Tools; Fate/Transport Issues (2 hrs, 40 min total)

- Speakers
- David Jewett and Rick Wilkin, ORD/NRMRL; Nick Loux, Gerry Laniak, Karl Castleton and Dave Brown, ORD/NERL; Carol Russell, R8
 - Overview of available modeling/prediction tools to assess fate and transport, risk, acid mine drainage, and ecological impacts. Speaker(s): David Jewett, ORD/NRMRL (20 min)
 - General presentation on fate and transport issues for mining wastes, with emphasis on groundwater-surface water interactions, groundwater issues, geochemical issues (and associated use of modeling/predictive tools), and acid mine drainage impacts on aquifer quality. Speaker(s): Rick Wilkin, ORD/NRMRL (1 hr)
 - Developments in, and mining site application of, MINTEQ (metals fate/transport model). Speaker(s): Nick Loux, ORD/NERL (20 min)
 - OSWER's HWIR regulation fate/transport modeling; potential for application of this modeling methodology to a mine site assessment scenario. Speaker(s): Gerry Laniak, Karl Castleton and Dave Brown, ORD/NERL (20 min)
 - Handouts on available models

10:00-10:15 am PST: Break

10:15 am PST: Modeling and Predictive Tools; Fate/Transport Issues (Case Study)

- Upper Boulder River and Upper Animis Basin: determining the point and nonpoint sources that most significantly impact watersheds and stream/river quality. Speaker(s): Carol Russell, R8 (40 min)

10:55 am PST: Remediation and Treatment/Control of Releases from Mining Sites (3 hrs, 25 min total)

- Speakers
- Rick Wilkin, Bob Puls, David Reisman, Diana Bless and Roger Wilmoth, ORD/NRMRL; John Hillenbrand, R9.
 - Monitored Natural Attenuation of Inorganics. Speaker(s): Bob Puls, ORD/NRMRL (30 min)

11:25 am - 12:00 pm PST: Lunch

Thursday June 15, 2000: Day 2 (continued)

12:00 pm PST: Remediation and Treatment/Control of Releases from Mining Sites (cont'd)

- Overview of the Mine Waste Technology Program, and brief description of each project (Butte MN). Speaker(s): Diana Bless and Roger Wilmoth, ORD/NRMRL (45 min presentation, 15 min discussion)
- Feasibility/effectiveness of closing/isolating/reclaiming/stabilizing acid generating tailings or waste piles in streamside settings. Speaker(s): Diana Bless, ORD/NRMRL (15 min)
- Effectiveness of plugging mine adits that discharge acid mine drainage to streams; catastrophic failure issues. Speaker(s): Diana Bless, ORD/NRMRL (10 min)
- Cyanide treatment methods. Speaker(s): Diana Bless, ORD/NRMRL (10 min)

1:35-1:45 pm PST: Break

1:45 pm PST: Remediation and Treatment/Control of Releases from Mining Sites (cont'd)

- ORD Engineering Technical Support for Mining Sites. Speaker(s): David Reisman, ORD/NRMRL (20 min)
- Improved or new methods or technologies for storage/remediation of mine wastes, including engineered wetlands and permeable reactive barriers. Speaker(s): Bob Puls, Rick Wilkin and Diana Bless, ORD/NRMRL (40 min)
- Case Study discussion on the ASARCO Ray site (a large remedial action site in Arizona): site-specific issues to be discussed include: sources, enforcement issues, remediation. Speaker(s): John Hillenbrand, R9 (20 min)

3:05 pm PST: Technical Transfer (30 min)

- Speakers
- Mike Bishop, R8; Ed Hanlon, ORD/OSP
 - Developing a local web site, linking to all aspects of mining waste issues and other web sites. Identifying current events on a web page. Distilling out potentially promising elements of full scale remediation projects, and include this on the web with a repository somewhere for useful documents. Speaker(s): Mike Bishop, R8, and Ed Hanlon, ORD/OSP (15 min)

Thursday June 15, 2000: Day 2 (continued):

3:20 pm PST: Technical Transfer (continued)

- Bibliography Discussion: Discussion will identify what are the highest priority issues on which to prepare a focused bibliography compilation after the conference, and criteria for the bibliography (e.g., articles/references within last 15 years; include a short abstract; break it down by federal agency, educational institution?). Speaker(s): Mike Bishop, R8 and Ed Hanlon, ORD/OSP (15 min)

3:35-3:45 pm PST: Break

3:45 pm PST: Close Out Discussions (Strawman Session)

- Summaries of main points and major research/study needs from each session, followed by overall discussion/summary of meeting findings.
- Other “needs” coming out of meeting (identify major future research and study needs; need for contractor supported web site for info sharing; discussion of who would address these needs and other followup items)
- Other discussion topics
- Specific action items

Speakers

- **Lead by one speaker/presenter from each topic area**
 - Regulatory and Non-scientific Issues: Nick Ceto, R10 and/or Steve Hoffman, OSWER? (10 min)
 - Characterization/Monitoring Issues: Larry Eccles, ORD/NERL, and/or Ed Heithmar, ORD/NERL? (10 min)
 - Remote Sensing: David Williams, ORD/NERL? (5 min)
 - Human Risk Assessment Issues: Paul White, ORD/NCEA, and/or Ed Hanlon, ORD/OSP? (5 min)
 - Biological/Ecological/Environmental Effects: Anne D. Dailey, R10 and/or Dale Hoff, R8? (15 min)
 - Modeling and Predictive Tools; Fate/Transport Issues: David Jewett, Rick Wilkin and/or Bob Puls, ORD/NRMRL? (10 min)
 - Remediation and Treatment/Control of Releases from Mining Sites: Diana Bless, Roger Wilmoth, ORD/NRMRL (15 min)
 - Technical Transfer: Mike Bishop, R8? (5 min)

5:00 pm PST: ADJOURN